CONTENTS—1990, Nos. 1-4

| ABLE, KENNETH W. A revision of Arctic snailfishes of the genus Liparis (Scorpaeniformes: Cyclopteridae) | 6 |
|---|-----|
| Adams, Mark (Moritz, Craig) | |
| AMAOKA, KUNIO AND HISASHI IMAMURA. Two new and one rare species of bothid flounders from Saya de Malha Bank, Indian Ocean (Teleostei: Pleuronectiformes) | 1 |
| AMAOKA, KUNIO AND N. V. PARIN. A new flounder Chascanopsetta megagnatha, from the Sala-y-Gomez submarine ridge Eastern Pacific Ocean (Teleostei: Pleuronectiformes: Bothidae) | 7 |
| AMEMIYA, CHRIS T. AND JOHN R. GOLD. Chromosomal NOR phenotypes of seven species of North American Cyprinidae, with comments on cytosystematic relationships of the <i>Notropis volucellus</i> speciesgroup, <i>Opsopoeodus emiliae</i> , and the genus <i>Pteronotropis</i> | 58 |
| Anderson, M. Eric (see Follett, W. I.) Baldwin, Carole C. Morphology of the larvae of American Anthiinae (Teleostei: Serranidae), with | |
| comments on relationships within the subfamily | 13 |
| Basso, Nestor G. (see Kehr, Arthuro I.) | |
| BAVERSTOCK, PETER (see Moritz, Craig) | |
| BJORNDAL, KAREN A. (see Witherington, Blair E.) | |
| Blum, Patricia C. (see Luer, Carl A.) | |
| Bramble, J. E. (see Sexton, O. J.) | |
| Brandt, Laura A. and Frank J. Mazzotti. The behavior of juvenile Alligator mississippiensis and Caiman crocodilus exposed to low temperature | 67 |
| Brandt, S. B. (see MacNeil, D. B.) | |
| Brooks, Ronald J. (see Knight, Thomas W.) | |
| Brooks, Ronald J. (see Londos, Pamela L.) | |
| Brown, Barbara (see Moller, Peter) | |
| Bruce, Richard C. An explanation for differences in body size between two desmognathine salamanders | 1 |
| Bull, C. M. (see Richards, S. J.) | |
| BURGER, JOANNA. Responses of hatching pine snakes (Pituophis melanoleucus) to chemical cues of sympatric snakes | 60 |
| BUTH, DONALD G. (see Collins-Rainboth, Allison) | |
| CAILLIET, GREGOR M. (see Natanson, Lisa J.) | |
| CAILLIET, GREGOR M. (see Yudin, Katherine G.) | |
| CAIRA, JANINE N. (see Crow, Gerald L.) | |
| CAMILLERI, CAROLINE AND RICHARD SHINE. Sexual dimorphism and dietary divergency: differences in | |
| trophic morphology between male and female snakes | 49 |
| CARAMASCHI, ULISSES AND RENATO N. FEIO. A new species of Hyla (Anura, Hylidae) from southern Minas Gerais, Brazil | 42 |
| CARNEY, DOUGLAS A. AND LAWRENCE M. PAGE. Meristic characteristics and zoogeography of the genus Ptychocheilus (Teleostei: Cyprinidae) | 71 |
| CARPENTER, KENT E. A phylogenetic analysis of the Caesionidae (Perciformes: Lutjanoidea) 6 | |
| CARRIER, JEFFREY C. AND CARL A. LUER. Growth rates of the nurse shark Ginglymostoma cirratum 6 | |
| CASHNER, ROBERT C. (see Grady, James M.) | |
| CHAPMAN, ROBERT W. Mitochondrial DNA analysis of striped bass populations in Chesapeake Bay 3 CHARLAND, M. BRENT (see Macartney, J. Malcolm) | 55 |
| CHARLAND, M. BRENT AND PATRICK T. GREGORY. The influence of female reproductive status on thermoregulation in a viviparous snake Crotalus viridis | 89 |
| CLARKSON, JAMES C. (see Platz, James E.) | |
| CLINE, GEORGE R. (see Tumlison, Renn) | |
| COCROFT, REGINALD B., ROY W. McDIARMID, ALAN P. JASLOW AND PEDRO M. RUIZ-CARRANZA. Vo- calization of eight species of <i>Atelopus</i> (Anura: Bufonidae) with comments on communication within | |
| the genus | 531 |
| COLE, KATHLEEN S. AND DOUGLAS Y. SHAPARIO. Gonad structure and hermaphroditism in the gobiid genus Coryphopterus (Teleostei: Gobiidae) | 996 |
| COLGAN, PATRICK (see Gotceitas, Vytenis) | |
| COLLINS-RAINBOTH, ALLISON AND DONALD G. BUTH. A reevaluation of the systematic relationships | 955 |
| COON, THOMAS G. (see Vogt, Gerald F., Jr) | |

| COOPER, P. D. AND MICHAEL D. ROBINSON. Water balance and bladder function in the Namib Desert |
|---|
| sand dune lizard, Aporosaura anchietae (Lacertidae) 34 |
| COOPER, WILLIAM E., JR. Prey odor detection by teild and lacertid lizards and the relationships of prey |
| odor detection to foraging mode in lizard families 237 |
| CORTÉS, ENRIC AND SAMUEL H. GRUBER. Diet, feeding habits and estimates of daily ration of young lemon sharks, Negaprion brevirostris (Poey) 200 |
| COWELL, BRUCE C. (see Grier, Harry J.) |
| COWEN, ROBERT K. Sex change and life history patterns of the labrid, Semicossyphus pulcher, across an environmental gradient |
| CROWE, GERALD L., JEFFREY C. HOWE, SENZO UCHIDA, STEVE KAMOLNICK, MARTIN G. WISNER AND JANINE N. CAIRA. Protrusion of the valvular intestine through the cloaca in sharks of the family Carcharinidae |
| CRUMP, MARTHA L. Possible enhancement of growth in tadpoles through cannibalism |
| CURRENS, KENNETH P., CARL B. SCHRECK AND HIRAM W. Li. Allozyme and morphological divergence of rainbow trout (Oncorhynchus mykiss) above and below waterfalls in the Deschutes River, Oregon 730 DAJCZAK, STANISLAW P. (see Deslippe, Richard J.) |
| DARIAN-SMITH, CORINNA (see Maloney, John E.) |
| DEMARTINI, EDWARD E. Annual variations in fecundity, egg size and condition of the plainfin midshipman (Porichthys notatus) 85 |
| DENONCOURT, ROBERT F. (see Raesly, Richard L.) |
| DESLIPPE, RICHARD J., ROBERT T. M'CLOSKEY, STANISLAW P. DAJCZAK AND CHRISTOPHER P. SZPAK. |
| Female tree lizards: oviposition and activity patterns during the breeding season |
| DODD, C. KENNETH, JR. Line transect estimation of Red Hills salamander burrow density using a Fourier Series 55 |
| Donnellan, Steve (see Moritz, Craig) |
| DOROFF, ANGELA M. AND LLOYD B. KEITH. Demography and ecology of an ornate box turtle (Terrapene |
| ornata) population in south-central Wisconsin |
| |
| garter snake, Thamnophis sirtalis 56 Dyson, Miranda L. (see Telford, Stephen R.) |
| EKLUND, ANNE-MARIE AND TIMOTHY E. TARGETT. Reproductive seasonality of fishes inhabiting hard |
| bottom areas in the Middle Atlantic Bight |
| Evans, D. A. (see Musick, J. A.) |
| FEIO, RENATO N. (see Caramaschi, Ulisses) |
| FIGIEL, CHESTER R., JR. AND RAYMOND D. SEMLITSCH. Population variation in survival and metamor- |
| phosis of larval salamanders (Ambystoma maculatum) in the presence and absence of fish predation 81 |
| FOLLETT, W. I. AND M. ERIC ANDERSON. Esselenia, a new genus of pricklebacks (Teleostei: Stichaeidae), with two new species from California and Baja California Norte |
| FRAZER, NAT B., J. WHITFIELD GIBBONS AND JUDITH L. GREENE. Exploring Fabens' growth interval model with data on a long-lived vertebrate, Trachemys scripta (Reptilia: Testudinata) |
| FRAZER, NAT B., J. WHITFIELD GIBBONS AND TIMOTHY J. OWENS. Turtle trapping: preliminary tests of conventional wisdom |
| GANS, CARL (see Gasc, Jean-Pierre) |
| GASC, JEAN-FIERRE AND CARL GANS. Tests on locomotion of the elongate and limbless lizard Anguis fragilis (Squamata: Anguidae) |
| GELWICK, FRANCES P. Longitudinal and temporal comparisons of riffle and pool fish assemblages in a northeastern Oklahoma Ozark stream |
| Gibbons, J. Whitfield (see Frazer, Nat B.) |
| GILBERT, PERRY W. (see Luer, Carl A.) |
| GIVEN, MAC F. AND DAWN M. McKAY. Variation in the citrate synthase activity in calling muscles of |
| carpenter frogs, Rana virgatipes 8 |
| GOBALET, KENNETH W. Prehistoric status of freshwater fishes of the Pajaro-Salinas River system of California 66 |
| GOLD, JOHN R. (see Amemiya, Chris T.) |
| GOTCEITAS, VYTENIS AND PATRICK COLGAN. The effects of prey availability and predation risk on |
| habitat selection by juvenile bluegill sunfish40 |
| GRADY, JAMES M., ROBERT C. CASHNER AND JAMES S. ROGERS. Evolutionary and biogeographic relationships of Fundulus catenatus (Fundulidae) |
| GREENBAUM, IRA F. (see Hedin, Marshal C.) |
| GREENBAUM, IRA F. (see Reed, Kent M.) |
| GREENE, JUDITH L. (see Frazer, Nat B.) |

J

| GREENFIELD, DAVID W. Poecilia teresae, a new species of poeciliid fish from Belize, Central America 449 GREENFIELD, DAVID W. AND ROBERT KARL JOHNSON. Community structure of western Caribbean blen- |
|--|
| nioid fishes 433 |
| GREENFIELD, DAVID W. AND ROBERT K. JOHNSON. Heterogeneity in habitat choice in cardinalfish |
| community structure 1107 |
| GREGORY, PATRICK T. (see Charland, M. Brent) |
| GREGORY, PATRICK T. (see Macartney, J. Malcolm) GREGORY, PATRICK T. (see St. Clair, Robert C.) |
| GRIER, HARRY J., DERRIL P. MOODY AND BRUCE C. COWELL. Internal fertilization and sperm morphology |
| in the brook silverside, Labidesthes sicculus (Cope) 221 |
| GRIFFITH, HUGH. Miniaturization and elongation in Eumeces (Sauria: Scincidae) 751 |
| Gruber, Samuel H. (see Cortes, Enric) |
| GRUBER, SAMUEL H. (see Snelson, Franklin F., Jr.) |
| GRUBER, SAMUEL H. (see Strong, Wesley R.) |
| HALPIN, ZULEYMA TANG. Responses of juvenile eastern garter snakes (Thamnophis sirtalis sirtalis) to own conspecific and clean odors |
| HASUMI, MASATO, HISAAKI IWASAWA AND YOSHITAKA NAGAHAMA. Seasonal dynamics of reproductive |
| organs in male salamanders of the species Hynobius nigrescens |
| HEATWOLE, HAROLD (see Zimmerman, Kenneth) |
| HEDGES, BLAIR S. A new species of Phrynopus (Anura: Leptodactylidae) from Perú |
| HEDIN, MARSHAL C., PHILIP D. SUDMAN, IRA F. GREENBAUM AND JACK W. SITES, JR. Synaptonemal |
| complex analysis of sex chromosome pairing in the common ground skink, Scincella lateralis (Sauria, Scincidae) |
| Heins, David C. Field evidence for multiple clutches in the longnose shiner 579 |
| HENLE, KLAUS. Population ecology and life history of three terrestrial geckos in arid Australia |
| Hensley, Dannie A. and John E. Randall. A redescription of Engyprosopon macrolepis (Teleostei: Bothidae) |
| Hensley, Dannie A. and Arnold Y. Suzumoto. Bothids of Easter Island, with the description of a new species of Engyprosopon (Teleostei: Pleuronectiformes) |
| HERKE, SCOTT W., IRV KORNFIELD, PAUL MORAN AND JOHN R. MORING. Molecular confirmation of |
| hybridization between northern pike (Esox lucius) and chain pickerel (E. niger) |
| HERNANDEZ-MARTICH, J. DAVID AND MICHAEL H. SMITH. Patterns of genetic variation in eastern mosquitofish (Gambusia holbrooki Girard) from the piedmont and the coastal plain of three drainages |
| HILLIS, DAVID M. (see Mayden, Richard L.) |
| HILLIS, DAVID M. (see Platz, James E.) |
| HINSHAW, STEVEN H. (see Sullivan, Brian K.) |
| HÖDL, WALTER. An analysis of foam nest construction in the neotropical frog Physalaemus ephippifer (Leptodactylidae) |
| Hourigan, Thomas F. (see Ross, Robert W.) |
| Howe, Jeffrey C. (see Crowe, Gerald L.) |
| IHRIG, J. W. (see Rutherford, D. Allen) |
| IMAMURA, HISASHI (see Amaoka, Kunio) |
| INGER, ROBERT F. (see Nodzenski, Edwardine) IVERSON, IOHN B. Sex ratios in snakes: a cautionary note |
| |
| IWASAWA, HISAAKI (see Hasumi, Masato) JACKSON, JAMES F. Evidence for chemosensor-mediated predator avoidance in musk turtles |
| |
| JANSSEN, JOHN Localization of substrate vibrations by the mottled sculpin (Cottus bairdi) |
| JASLOW, ALAN P. (see Cocroft, Reginald B.) JOHN-ALDER, HENRY B. AND PETER J. MORIN. Effects of larval density on jumping ability and stamina in newly metamorphosed Bufo woodhousii fowleri |
| , |
| JOHNSON, ROBERT KARL (see Greenfield, David W.) |
| JOHNSTON, CAROL E. (see Page, Lawrence M.) |
| JOHNSTON, CAROL E. AND JOHN S. RAMSEY. Redescription of Semotilus thoreauianus Jordan, 1877, a |
| cyprinid fish of the southeastern United States |
| KAMOLNICK, STEVEN (see Crowe, Gerald L.) KARP, CATHERINE A. AND HAROLD M. TYUS. Behavioral interactions between young Colorado squawfish |
| and six fish species |
| KEHR, ARTHURO I. AND NESTOR G. BASSO. Description of the tadpole of Lysapsus limellus (Anura: Pseudidae) and some considerations on its biology |
| KEITH, LLOYD B. (see Doroff, Angela M.) |
| KNIGHT, THOMAS W., JAMES A. LAYFIELD AND RONALD J. BROOKS. Nutritional status and mean selected |

| temperature of hatchling snapping turtles (Chelydra serpentina): is there a thermophilic response to feeding?10 |
|--|
| Knowles, Travis W. and Peter D. Weigl. Thermal dependence of anuran burst locomotor performance. |
| KORNFIELD, IRV (see Herke, Scott W.) |
| KRUPA, JAMES J. Advertisement call variation in the Great Plains toad |
| LAMB, TRIP AND JEFF LOVICH. Morphometric validation of the striped mud turtle (Kinosternon baurii) |
| in the Carolinas and Virginia 6 |
| LANG, JEFFREY W. (see Dunlap, Kent D.) |
| Layfield, James A. (see Knight, Thomas W.) |
| LEE, Y. J. (see Rutherford, D. Allen) |
| LI, HIRAM W. (see Currens, Kenneth P.) |
| LIMPUS, COLIN J. (see Maloney, John E.) |
| LONDOS, PAMELA L. AND RONALD J. BROOKS. Time course of temperature acciimation of locomotory performance in the toad, Bufo woodhousii woodhousii |
| LONDRAVILLE, RICHARD. A courtship-like behavior pattern that can be used to sex a butterflyfish (Chaetodontidae) |
| LOVICH, JEFF (see Lamb, Trip) |
| LUER, CARL A. (see Carrier, Jeffrey C.) |
| LUER, CARL A., PATRICIA C. BLUM AND PERRY W. GILBERT. Rate of tooth replacement in the nurse shark, Ginglymostoma cirratum1 |
| LUTNESKY, MARVIN M. F. (see Ross, Robert M.) |
| MACARTNEY, J. MALCOLM, PATRICK T. GREGORY AND M. BRENT CHARLAND. Growth and sexual maturity |
| of the western rattlesnake, Crotalus viridis, in British Columbia |
| MacNeill, D. B. and S. B. Brandt. Ontogenetic shifts in gill-raker morphology and predicted prey capture efficiency of the alewife, Alosa pseudoharengus |
| MALONEY, JOHN E., CORINNA DARIEN-SMITH, YOSHIMI TAKAHASHI AND COLIN J. LIMPUS. The envi- |
| ronment for development of the embryonic loggerhead turtle (Caretta caretta) in Queensland |
| MAYDEN, RICHARD L. AND DAVID M. HILLIS. Natural history and systematics of the largemouth shiner, Cyprinella bocagrande (Teleostei: Cypriniformes), with comments on conservation status |
| MAZZOTTI, FRANK J. (see Brandt, Laura A.) |
| McCabe, Cathleen M. (see Witherington, Blair E.) |
| McCormick, Carolyn (see Williams, Jeffrey T.) |
| McCranie, James R. and Larry David Wilson. A description of the tadpole of <i>Hyla salvavdia</i> (Anura: Hylidae) |
| McDiarmid, Roy W. (see Cocroft, Reginald B.) |
| McGrogan, Douglas G. and David L. G. Noakes. Mirror-box for photographing small fishes1 |
| McKay, Dawn M. (see Given, Mac F.) |
| M'CLOSKEY, ROBERT T. (see Deslippe, Richard J.) |
| MEEKS, ROBERT L. AND GORDON R. ULTSCH. Overwintering behavior of snapping turtles |
| MEFFE, GARY K. Offspring size variation in eastern mosquitofish (Gambusia holbrooki: Poeciliidae) from |
| contrasting thermal environments |
| MEYLAN, PETER A., BLAIR S. WEIG AND ROGER C. WOOD. Fossil soft-shelled turtles (Family Trionychidae) of the Lake Turkana Basin, Africa |
| MILLER, DAVID E. AND HENRY R. MUSHINSKY. Foraging ecology and prey size in the mangrove water snake Nerodia fasciata compressicauda |
| MINCKLEY, W. L. AND STEPHEN P. VIVES. Cavity nesting and male nest defense by the ornate minnow, Codoma ornata (Pisces: Cyrpinidae) |
| MOLLER, PETER AND BARBARA BROWN. Meristic characters and electric organ discharge of Mormyrops |
| curviceps Roman (Teleostei: Mormyridae) from the Moa River, Sierra Leone, West Africa |
| Mooi, Randall D. Egg surface morphology of pseudochromoids (Perciformes: Percoidei), with com- |
| ments on its phylogenetic implications |
| MORAN, PAUL (see Herke, Scott W.) |
| MORIN, PETER J. (see John-Alder, Henry B.) |
| MORING, JOHN R. (see Herke, Scott W.) |
| MORITZ, CRAIG, MARK ADAMS, STEVE DONNELLAN AND PETER BAVERSTOCK. The origin and evolution of parthenogenesis in <i>Heteronotia binoei</i> (Gekkonidae): genetic diversity among bisexual populations |
| MORRIS, MOLLY R. AND MICHAEL J. RYAN. Age at sexual maturity of male Xiphophorus nigrensis in nature |

| MORTIMER, JEANNE A. The influence of beach sand characteristics on the nesting behavior and clutch survival of green turtles (Chelonia mydas) |
|--|
| Mulvey, Margaret (see Travis, Joseph) |
| MUNROE, THOMAS A. Symphurus melanurus Clark, 1936, a senior synonym for the eastern Pacific |
| tonguefishes, S. seychellensis Chabanaud, 1955, and S. sechurae Hildebrand, 194629 |
| MUNROE, THOMAS A. AND MARTHA S. NIZINSKI. Symphurus melasmatotheca and S. undecimplerus (Cyno- |
| glossidae, Pleuronectiformes), two new Eastern Pacific tonguefishes with eleven caudal-fin rays 985 |
| MURRU, FRANK L. (see Snelson, Franklin F., Jr.) |
| Mushinsky, Henry R. (see Miller, David E.) |
| MUSICK, J. A., C. R. TABIT AND D. A. EVANS. Body surface area in galeoid sharks1130 |
| NAGAHAMA, YOSHITAKA (see Hasumi, Masato) |
| NATANSON, LISA J. AND GREGOR M. CAILLIET. Vertebral growth zone deposition in Pacific angel sharks |
| Nelson, Joseph S. Redescription of Antipodocottus elegans (Scorpaeniformes: Cottidae) from Australia, with comments on the genus |
| NISHIKAWA, KISSA C. Intraspecific spatial relationships of two species of terrestrial salamanders |
| Nizinski, Martha S. (see Munroe, Thomas A.) |
| NOAKES, DAVID L. G. (see McGrogan, Douglas G.) |
| NODZENSKI, EDWARDINE AND ROBERT F. INGER. Uncoupling of related structural changes in metamor- |
| phosing torrent-dwelling tadpoles 1047 |
| NORRIS, ŠTEVEN M. AND GUY G. TEUGELS. A new species of Ctenopoma (Teleostei: Anabantidae) from southeastern Nigeria492 |
| O'HARA, JAMES AND J. Ross Wilcox. Avoidance responses of loggerhead turtles, Caretta caretta, to low |
| frequency sound |
| OLMOS, FABIO AND IVAN SAZIMA. A fishing tactic in floating Paraguayan caiman: the cross-posture 875 |
| ORR, JAMES WILDER AND JOHN S. RAMSEY. Reproduction in the greenbreast darter, Etheostoma jordani (Teleostei: Percidae) |
| OWENS, TIMOTHY J. (see Fraser, Nat B.) |
| PAGE, LAWRENCE M. (see Carney, Douglas A.) |
| PAGE, LAWRENCE M. AND CAROL E. JOHNSTON. The breeding behavior of Opsopoeodus emiliae (Cyprin- |
| idae) and its phylogenetic implications |
| PARIN, N. V. (SEE AMAOKA, KUNIO) |
| Pelaz, Manuel Polls and Claude Rougier. A comparative study of buccal pump volumes and the |
| cartilaginous branchial basket skeleton of Rana ridibunda and Rana dalmatina 658 |
| Peterson, Charles C. Paradoxically low metabolic rate of the diurnal gecko Rhoptropus afer |
| PHILLIPS, C. (see Sexton, O. J.) |
| PIETSCH, THEODORE W. AND CYRUS P. ZABETIAN. Osteology and interrelationships of the sand lances (Teleostei: Ammodytidae) |
| PLATZ, JAMES E., ROBERT W. CLARKSON, JAMES C. RORABAUGH AND DAVID M. HILLIS. Rana berlandieri: |
| recently introduced populations in Arizona and southeastern California 324 |
| QUEIROZ, ALAN DE (see Schaeffel, Frank) |
| RAESLY, RICHARD L., JAY R. STAUFFER, JR. AND ROBERT F. DENONCOURT. Hybridization between |
| Etheostoma zonale and Etheostoma olmstedi (Teleostei: Percidae), following an introduction event 584 |
| RAMSEY, JOHN S. (see Johnston, Carol E.) |
| RAMSEY, JOHN S. (see Orr, James Wilder) |
| RANDALL, JOHN E. (see Hensley, Dannie A.) |
| REED, KENT M., PHILIP D. SUDMAN, JACK W. SITES, JR. AND IRA F. GREENBAUM. Synaptonemal complex |
| analysis of sex chromosomes in two species of Sceloporus 1122 |
| RICHARDS, S. J. AND C. M. BULL. Size-limited predation on tadpoles of three Australian frogs1041 |
| ROBERTSON, IAN C. (see Weatherhead, Patrick J.) |
| ROBINSON, MICHAEL D. (see Cooper, P. D.) |
| ROGERS, JAMES S. (see Grady, James M.) |
| ROSS, ROBERT M., THOMAS F. HOURIGAN, MARVIN M. F. LUTNESKY AND ISHWAR SINGH. Multiple simultaneous sex changes in social groups of a coral-reef fish |
| ROUGIER, CLAUDE (see Pelaz, Manuel Polls) |
| RUIZ-CARRANZA, PEDRO M. (see Cocroft, Reginald B.) |
| RUTHERFORD, D. ALLEN, J. W. IHRIG AND Y. J. LEE. Albinism in Ictalurus furcatus (Osteichthyes: Ictaluridae)1174 |
| RYAN, MICHAEL J. (see Morris, Molly R.) |
| SAZIMA, IVAN (see Fabio Olmos) |
| SCHAFFEL, FRANK AND ALAN DE QUEIROZ. Alternative mechanisms of enhanced underwater vision in |
| garter snakes Thamnophis melanogaster and T. couchi50 |

| SCHMID, THOMAS H. (see Snelson, Franklin F., Jr.) | |
|--|----|
| SCHRECK, CARL B. (see Currens, Kenneth P.) | |
| SCHULTZ, ERIC T. Daily otolith increments and the early life history of a viviparous fish, Micrometrus minimus (Embiotocidae) | |
| Schwaner, Terry D. Geographic variation in scale and skeletal anomalies of tiger snakes (Elapidae: Notechis acutatus-ater complex) in southern Australia | |
| SEMLITSCH, RAYMOND D. (see Figiel, Chester R., Jr.) | |
| SEMLITSCH, RAYMOND D. (see Wilbur, Henry M.) | |
| Sexton, O. J., C. Phillips and J. E. Bramble. The effects of temperature and precipitation on the breeding migration of the spotted salamander (Ambystoma maculatum) | 1 |
| Shapiro, Douglas Y. (see Cole, Kathleen S.) | |
| SHINE, RICHARD (see Camilleri, Caroline) | |
| Singh, Ishwar (see Ross, Robert M.) | |
| SITES, JACK W., JR. (see Hedin, Marshal C.) SITES, JACK W., JR. (see Reed, Kent M.) | |
| SMITH, MICHAEL H. (see Hernandez-Martich, J. David) | |
| SNELSON, FRANKLIN F., JR. Redescription, geographic variation, and subspecies of the minnow Notropis | |
| ardens (Pisces: Cyprinidae) 966 | 6 |
| SNELSON, FRANKLIN F., JR. (see Strong, Wesley R., Jr.) | |
| SNELSON, FRANKLIN F., Jr., SAMUEL H. GRUBER, FRANK L. MURRU AND THOMAS H. SCHMID. Southern stingray, Dasyatis americana: host for a symbiotic cleaner wrasse | 1 |
| SOLORZANO, ALEJANDRO. Reproduction in the pit viper Porthidium picadoi Dunn (Serpentes: Viperidae) | |
| in Costa Rica | 4 |
| STAUFFER, JAY R., JR. (see Raesly, Richard L.) | |
| St. Clair, Robert C. and Patrick T. Gregory. Factors affecting the northern range limit of painted turtles (Chrysemys picta): winter acidosis or freezing? | 3 |
| STRONG, WESLEY R., JR., FRANKLIN F. SNELSON, JR. AND SAMUEL H. GRUBER. Hammerhead shark | _ |
| predation on stingrays: an observation of prey handling by Sphyrna mokarran 83 | 6 |
| SUDMAN, PHILIP D. (see Hedin, Marshal C.) | |
| SUDMAN, PHILIP D. (see Reed, Kent M.) SULLIVAN, BRIAN K. AND STEVEN H. HINSHAW. Variation in advertisement calls and male calling behavior | |
| in the spring peeper (Pseudacris crucifer) 114 | 6 |
| SUZUMOTO, AROLD Y. (see Hensley, Dannie A.) | |
| SZELISTOWSKI, WILLIAM A. A new clingfish (Teleostei: Gobiesocidae) from the mangroves of Costa | |
| Rica, with notes on its ecology and early development 50 | 0 |
| SZPAK, CHRISTOPHER P. (see Deslippe, Richard J.) | |
| TABIT, C. R. (see Musick, J. A.) | |
| Takahashi, Yoshimi (see Maloney, John E.) | |
| TANNER, MICHAEL J. (see Weldon, Paul J.) | |
| TARGETT, TIMOTHY E. (see Eklund, Anne-Marie) TELFORD, STEVEN R. AND MIRANDA L. DYSON. The effect of rainfall on interclutch interval in painted | |
| reed frogs (Hyperolius marmoratus) | 4 |
| Teugels, Guy G. (see Norris, Steven M.) | • |
| TRAVIS, JOSEPH, JOEL C. TREXLER AND MARGARET MULVEY. Multiple paternity and its correlates in | |
| female Poecilia latipinna (Poeciliidae) 72 | 22 |
| TREXLER, JOEL C. (see Travis, Joseph) | |
| Tumlison, Renn, George R. Cline and Phillip Zwank. Morphological discrimination between the Oklahoma salamander (Eurycea tynerensis) and the graybelly salamander (Eurycea multiplicae | |
| griseogaster) 24 | 12 |
| Tyus, Harold M. (see Karp, Catherine A.) | |
| UCHIDA, SENZO (see Crow, Gerald L.) ULTSCH, GORDON R. (see Meeks, Robert L.) | |
| Vives, Stephen P. (see Minckley, W. L.) | |
| VOGT, GERALD F., JR. AND THOMAS G. COON. A comparison of the foraging behavior of two darter | 11 |
| WASSER, JEREMY S. Seasonal variation in plasma and tissue chemistry in water snakes, Nerodia sipedon 39 | |
| WEATHERHEAD, PATRICK J. AND IAN C. ROBERTSON. Homing to food by black rat snakes (Elaphe | |
| obsoleta)116 | 54 |
| Webb, Jacqueline F. Comparative morphology and evolution of the lateral line system in the Labridae (Perciformes: Labroidei) | 37 |
| WEIG, BLAIR S. (see Meylan, Peter A.) | |

| gerhead sea turtles (Caretta caretta) | |
|---|----------|
| WHITEHEAD, PETER J. Yolk depletion and metabolic rate of hatchling Crocodylus johnstoni | 87 |
| WILBUR, HENRY M. AND RAYMOND D. SEMLITSCH. Ecological consequences of tail injury in Rana tadpoles | 1 |
| WILCOX, J. Ross (see O'Hara, James) | |
| WILLIAMS, JEFFREY T. AND CAROLYN J. McCORMICK. Two new species of the triplefin fish genus Hocogramma (Tripterygiidae) from the western Pacific Ocean | |
| WILSON, LARRY DAVID (see McCranie, James R.) | |
| WINEMILLER, KIRK O. Caudal eyespots as deterrents against fin predation in the neotropical cichl Astronotus ocellatus | id 60 |
| WISNER, MARTIN G. (see Crow, Gerald L.) | |
| WITHERINGTON, BLAIR E., KAREN A. BJORNDAL AND CATHLEEN McCABE. Temporal pattern of nocturn emergence of loggerhead turtle hatchlings from natural nests | |
| WOOD, ROGER C. (see Meylan, Peter A.) | |
| YUDIN, KATHERINE G. AND GREGOR M. CAILLIET. Age and growth of the gray smoothhound, Mustel californicus, and the brown smoothhound, M. henlei, sharks from central California | |
| ZABETIAN, CYRUS P. (see Pietsch, Theodore W.) | |
| ZIMMERMAN, KENNETH AND HAROLD HEATWOLE. Cutaneous photoreception: a new sensory mechanis for reptiles | m 8 |
| ZWANK, PHILLIP (see Tumlison, Renn) | |